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ABSTRACT

The 1989 document, "Curriculum and Evaluation Standards for School Mathematics" provides a vision and a framework for revising and strengthening the K-12 mathematics curriculum in North American schools and for evaluating both the mathematics curriculum and students' progress. When completed, it is expected that the Addenda Series will consist of 22 supporting books designed to interpret and illustrate how the vision could be translated into new classroom practices. Targeted at mathematics instruction in grades K-6, 5-8, and 9-12, the themes of problem solving, reasoning, communication, and connections are woven throughout the materials, as is the view of assessment as a means of guiding instruction. The goal of the "Geometry from Multiple Perspectives" book in the 9-12 series is to link the content proposed in the "Curriculum and Evaluation Standards" document to that of current programs. Ways for blending coordinate and transformation geometry with conventional geometry are described and supported by specific examples. The examples are presented in the booklet's 10 chapters in the form of comprehensive activities for which the solutions and hints for implementation are given in the appendix; in addition, each chapter has several "Try This" features that provide exercises, problems, and explorations for use with students. The chapters are: (1) Why Should Geometry be Considered from Multiple Perspectives? (2) Elements of Contemporary Geometry; (3) Triangles from Multiple Perspectives; (4) Quadrilaterals from Multiple Perspectives; (5) Polygons from Multiple Perspectives; (6) Solids: Expanded Perspectives; (7) Reasoning about Shapes Using Coordinates and Transformations; (8) Congruence from

Multiple Perspectives; (9) Similarity from Multiple Perspectives; and (10) Reasoning, Justification, and Proof. (MDH)

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